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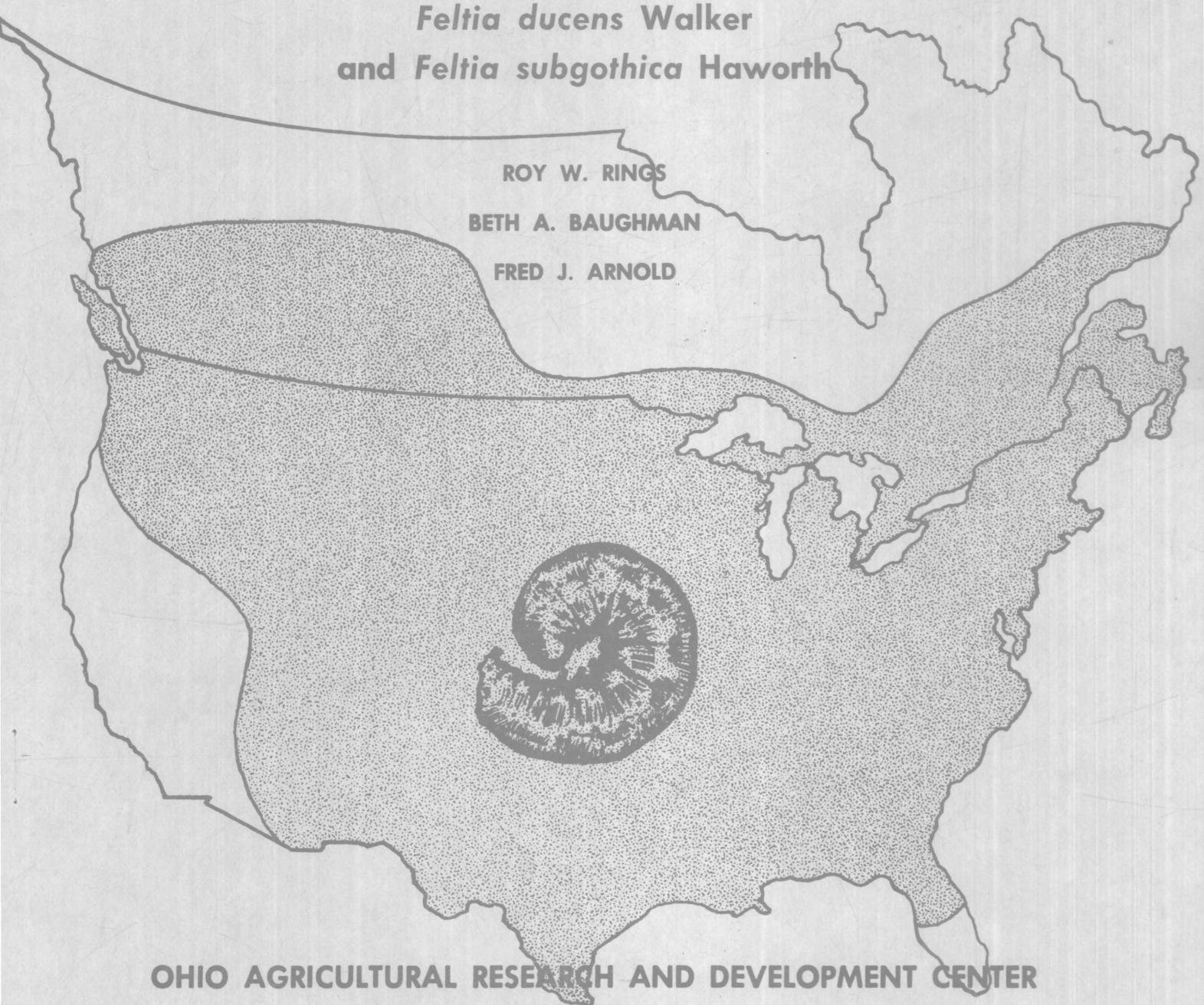
An Annotated Bibliography of the Dingy Cutworm Complex

Feltia ducens Walker and *Feltia subgothica* Haworth

ROY W. RINGS

BETH A. BAUGHMAN

FRED J. ARNOLD



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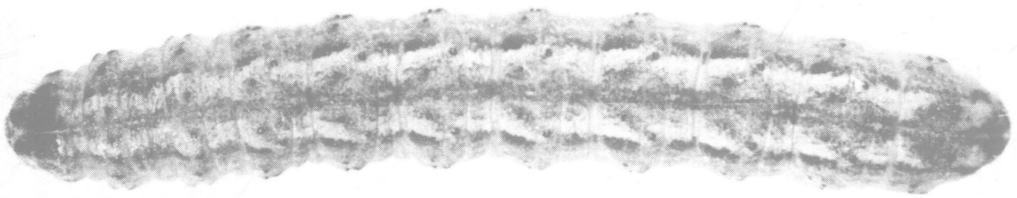
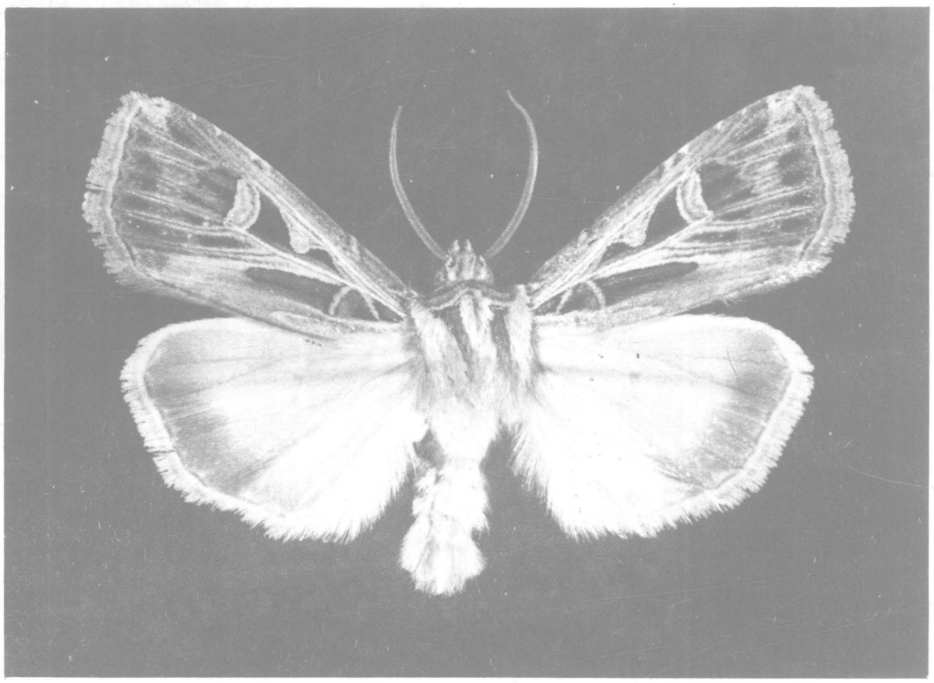


Dingy Cutworm Larva



Dingy Cutworm Adult

AN ANNOTATED BIBLIOGRAPHY OF THE DINGY CUTWORM COMPLEX, Feltia ducens Walker and Feltia subgothica (Haworth)

Roy W. Rings[1], Beth A. Baughman[2], and Fred J. Arnold[2]

Introduction

The purpose of this circular is to consolidate the abstracted literature on the dingy cutworm complex, *Feltia ducens* Walker and *Feltia subgothica* (Haworth). The term "dingy cutworm complex" is used since there is much confusion and disagreement between both earlier and contemporary taxonomists as to the correct usage of the scientific name of the economically important dingy cutworm.

Contemporary taxonomists agree that *Feltia ducens* and *Feltia subgothica* have been considered distinct species for more than 70 years. In the past there has been debate as to whether the latter species should be called *subgothica* or *jaculifera*. In this publication, the authors are following the nomenclatural policy of the United States National Museum which is based upon Forbes' interpretation of the complex. The photographs on the contents page illustrate the species which the authors consider the dingy cutworm, *Feltia ducens* Walker. Forbes (1954) believed that Haworth (1810) probably had *ducens* and *subgothica* mixed up. He implied that it is not certain which species Haworth described as *subgothica* and therefore Forbes called it *jaculifera*. Several other authors (Hampson 1903; McDunnough 1938; Smith 1893) believed that Haworth had only a single specimen. This single specimen was located about 1900 and proved to be *subgothica*. To add to the confusion, British authors, following Haworth, illustrated *ducens* as *subgothica*.

In this publication, the most common species of economic importance known as the dingy cutworm is considered *Feltia ducens* Walker. However, in the bibliographical annotations the authors are using the same scientific name used by the author of the article. In most cases then, *Feltia subgothica* = *Feltia ducens* when non-taxonomic papers are summarized.

The following is a partial synonymy based upon the above comments:

Feltia ducens Walker

Feltia ducens Walker, 1856, p. 203; Grote and Robinson, 1868, p. 77; etc.
Agrotis ducens (Walker), Forbes, 1954, p. 46; etc.
Agrotis subgothica auct. nec (Haworth), Stephens, 1829, p. 126; etc.
Feltia subgothica auct. nec (Haworth), Smith, 1893, p. 81; etc.
Agrotis jaculifera Guenée (in part), 1852, p. 262.
Feltia radiata Smith, 1891, p. 38.

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[1]Professor, Department of Entomology, Ohio Agricultural Research and Development Center, Wooster, Ohio 44691.

[2]Technical Assistants, Department of Entomology, Ohio Agricultural Research and Development Center, Wooster, Ohio 44691.

Feltia subgothica (Haworth)

Noctua subgothica Haworth, 1810, p. 224.
Agrotis subgothica (Haworth), Packard, 1869, p. 306.
Feltia subgothica (Haworth), Hampson, 1903, p. 345; McDunnough, 1938, p. 63; etc.
Agrotis jaculifera Guenée, (in part), 1852, p. 262; Riley, 1869, p. 82; etc.
Feltia jaculifera (Guenée), Smith, 1891, p. 38; -- 1893, p.81; etc.
Agrotis tricosa Lintner, 1874, p. 159; Harv., 1875, p. 5; etc.

The authors appreciate the opinions and advice of Dr. E. L. Todd, Systematic Entomology Laboratory, U. S. National Museum, Washington, D. C., and Dr. J. Donald Lafontaine, Biosystematics Research Institute, Research Branch, Canada Department of Agriculture, Ottawa, Ontario, in regard to the synonymy of the dingy cutworm complex.

It should be mentioned that the list of "Common names of insects approved by the Entomological Society of America" gives *Feltia subgothica* (Haworth) as the scientific name of the dingy cutworm. Therefore, economic entomologists will continue to use *subgothica* until the name is corrected.

The fully grown larva of *Feltia subgothica* is dingy gray and easily recognized by the broad, pale, dorsal stripe which is obliquely notched on the inner border and outlined by a narrow dark line on each side. The common name refers to the ground color of the larva.

The cutworm has a wide range of hosts, including alfalfa, apple, bean, cabbage, clover, corn, cucumber, flax, grasses, horseradish, onions, peas, raspberry, squash, tobacco, tomato, and wheat.

Walkden (1945) found that larvae were found, in order of preference, in the following situations: (1) overgrazed pasture, (2) little barley pasture, (3) roadside bluegrass, (4) dropseed wasteland, (5) native hay meadow, (6) alfalfa (old stand), (7) little bluestem pasture, (8) sweet clover, (9) orchard brome pasture, and (10) panic grass wasteland.

The moth was described in detail by Forbes (1954) and was figured in color by Holland (1968) in Plate 22.

The bibliographical information was obtained by a thorough search of the libraries at The Ohio State University and the Ohio Agricultural Research and Development Center for the years 1869 to 1973. The literature search recovered some, but not all, checklists, faunal lists, or comprehensive publicacations and texts which cannot be abstracted for the recovery of a single species. This publication is not intended to be a comprehensive bibliography for taxonomic purposes, but is believed to be complete as far as references in American abstracting journals are concerned.

The authors have established a profile on the dingy cutworm in cooperation with the Mechanized Information Center at The Ohio State University Libraries. This computerized system of retrieval will aid in keeping this bibliographical information current. Supplementary bibliographical data on the dingy cutworm complex will be summarized at yearly intervals and will be available on request from the Ohio Agricultural Research and Development Center.

The preparation of this bibliography is only a part of an extensive, multi-state, research program supported by grants from the Cooperative State Research Service and the federal Environmental Protection Agency. This is a regional research project entitled "Bionomics and Management of Soil Arthropod Pests."

The authors are sincerely grateful to the following individuals who provided literature citations, reprints, or photocopies for the bibliography: Dr. Clayton C. Beegle, Iowa State University; Dr. William H. Luckmann, Illinois Natural History Survey; and Dr. Richard J. Sauer, Michigan State University.

Entries are listed alphabetically by author except in cases where the publication is anonymous or more likely to be identified with a governmental agency under which it was published. The abbreviations in the citations follow the American standard for periodical title abbreviations which was published in Biological Abstracts, 45(13):4347-4361. All references in this publication deal with the dingy cutworm; however, the scientific name used in a given article is also used in the annotation so that there is no question as to the species being cited. The numbers in parentheses following the annotation represent the page numbers which include information on the dingy cutworm if they are different from the citation page numbers.

Bibliography

Ainslie, G. G. 1917. Crambid moths and light. J. Econ. Entomol. 10:114-123.
Collections of 14 species of *Crambinae* were taken at Nashville, with *Crambus teterrellus* the most abundant. It was found that the same principles held good in the case of several species not Crambids, for example, *Feltia subgothica* and *Feltia gladiaria,* although the data regarding the species are much more fragmentary and inconclusive. (115)

Anonymous. 1921. Las Cuncunillas. Serv. Policia Sanit. Vej., Santiago de Chile.:1-8.
Although cutworms are common to the gardens of Chile, it is only under unusual circumstances that they become serious pests. The dingy cutworm (*Feltia subgothica*) attacked corn, beans, various grasses and pasture plants.

Anonymous. 1935. Diseases, insects and other pests injurious to plants. Bien. Rep. Kans. Agr. Exp. Sta. 7:94-112. The dingy cutworm (*Feltia subgothica*, (Haw.); *Feltia ducens*, Wlk.) caused noticeable damage to alfalfa in the autumn of 1933 for the first time in several years. Most of the larvae were destroyed by cold weather.

Arnott, D. A. and H. W. Goble. 1943. The value of molasses-free baits in the control of cutworms in tobacco fields. 73rd Rep. Entomol. Soc. Ont. 1942:1-75.
The dingy cutworm (*Feltia ducens*) was found to be among the cutworms infesting tobacco crop areas of Norfolk County, Ontario. (31)

Balduf, W. V. 1931. The oviposition habits of *Feltia subgothica* Haw. (Noctuidae Lep.) Proc. Entomol. Soc. Wash. 33:81-88.
The eggs and young larvae of *Feltia subgothica* have frequently been observed in the flowers of *Helianthus* spp. in Ohio. It was not possible to trace the larvae of the dingy cutworm after they left the florets of *Helianthus* (81). A life history of the dingy cutworm is given. (82)

Balduf, W. V. 1942. The oviposition habits of *Feltia subgothica* Haworth. J. Econ. Entomol. 35(2):290.
Eggs of the dingy cutworm occurred in nature at several widely separated localities in Ohio and Illinois. The larvae from these eggs were reared on lettuce. The ovipositional procedure was described. (290)

Beadle, L. A. and H. F. Wilson. 1938. Insect pests. Bull. Wis. Agr. Exp. Sta. 440:1-95.
The dingy cutworm (*Feltia ducens*) Wlk. was one of the four species of cutworms found in Wisconsin that were so abundant as to cause serious damage. *Feltia ducens* comprised 19% of the total number of cutworms. (19-21)

Bethune, C. J. S. 1869. Notes on Canadian Lepidoptera. Can. Entomol. 1:85-89.
This article contains a list of species reported for the first time in Canada. "*Agrotis subgothica*, Haworth (*Feltia ducens*. Walk.) - Taken at Orillia, by Mr. Bush." (86)

Blackmore, E. H. 1918. Entomology. Rep. Provincial Museum Nat. Hist. British Columbia 1917:9-15.
"A rather severe outbreak of cutworms occurred in the Victoria and Vancouver districts during May and the early part of June, whole beds of garden produce being completely devastated. One of the chief pests was the dingy cutworm (*Feltia ducens*)."

Blickenstaff, C. C. 1970. Common names of insects approved by the Entomological Society of America. Entomol. Soc. Amer. Misc. Pub.:1-36.
The scientific name of the dingy cutworm is considered to be *Feltia subgothica* (Haworth). (6)

Bowles, G. J. 1879. Canadian cutworms. Annu. Rep. Entomol. Soc. Ont.: 1-89.
Mr. Riley referred to *Agrotis jaculifera* Guenée as the dingy cutworm and to *Agrotis subgothica* as the western striped cutworm. According to him, the dingy cutworm differs from the western striped cutworm in the following ways: it is never as large, generally more dingy or darker, less distinct longitudinal lines, and the back is a more decided pale buff. (40-41)

Britton, W. E. 1927. Twenty-sixth report of the state entomologist of Connecticut, 1926. Conn. Agr. Exp. Sta. Bull. 285:161-283.
The dingy cutworm (*Feltia subgothica*) is sometimes a climbing cutworm that eats the buds of young apple trees. (169)

Butler, A. G. 1889. Synonymic notes on the moths of the earlier genera of Noctuites. Trans. Entomol. Soc. London 1889:375-387.
"7. *Agrotis subgothica*, Haw.
Feltia ducens, Walker, Lep. Het., ix., p. 203, n. 1 (1856). An example from Orilla". (377)

The Canadian Agricultural Insect Pest Review

This publication aims to present, in manuscript form, a periodical statement on current insect pest conditions. It presents data governing the seasonal appearance, the effects of winter, degrees of parasitism, notes on distribution and abundance of insect pests. It has been published by the Canada Department of Agriculture, Research Branch--Scientific Information Section, Ottawa, Ontario, from 1923 to present. From 1923 to 1967, this publication was known as the Canadian Insect Pest Review.

1923. Can. Insect Pest Rev. 1.
Feltia ducens Wlk. was very plentiful in southern Alberta and was by far the most numerous noctuid taken in traps at Lethbridge. (52)

1924. Can Insect Pest Rev. 2.
Feltia ducens was observed among the cutworms at Saskatoon, Saskatchewan. (13)

Cutworms collected in the spring of 1924 in Mississippi showed *Feltia ducens* Wlk. or *Feltia subgothica* Haw. to be among the most abundant. They were collected in clover land and among rank weeds. (26)

1931. Can. Insect Pest Rev. 9.
A few specimens of the dingy cutworm *Feltia ducens* Wlk. were observed in garden crops in the Clarenceville districts, Quebec. (76)

1933. Can. Insect Pest Rev. 11.
A light infestation of the dingy cutworm, *Feltia ducens* Walk., was observed on hollyhocks in gardens in grassy surroundings at Strathroy, Ontario. (25)

1935. Can. Insect Pest Rev. 13.
Feltia ducens was among the cutworms that caused considerable damage to raspberry plants at Caradoc, Ontario. (93)

1936. Can. Insect Pest Rev. 14.
The dingy cutworm *Feltia ducens* Wlk. was found very numerous in about 3 acres of lowland in a 5-acre tract of spring plowed sod in Metcalf Township, Ontario. (80)

1938. Can. Insect Pest Rev. 16.
Dingy cutworms were taken at light traps but the level of infestation was low in Ontario. (250)

1941. Can. Insect Pest Rev. 19.
The dingy cutworm, *Feltia ducens* Wlk., was moderately common at lights in Marmora, Ontario. (250)

1942. Can. Insect Pest Rev. 20.
The dingy cutworm was observed in Saskatoon, Saskatchewan (Lampman-Estevan district), causing damage to flax (144); in Smeaton-Garrick area, Saskatchewan, on alfalfa (145); in Simcoe and Delhi, Ontario, on tobacco crops (228); and in Chatham, Ontario, in flight. (229)

1943. Can. Insect Pest Rev. 21.
The dingy cutworm was present at Niagara Falls, Ontario, on tobacco (34); in gardens at Niagara Falls on flowers and vegetables (47); and in Estevan-Lampman district, Saskatchewan, on flax. (70)

1944. Can. Insect Pest Rev. 22.
The dingy cutworm was present in Saskatoon, Saskatchewan, on flowers (141) and in Deveron and Drake in oat fields. (183)

1945. Can. Insect Pest Rev. 23.
The dingy cutworm was present in Manitoba on sunflowers (61) and in Deveron on field crops. (77)

1946. Can. Insect Pest Rev. 24.
The dingy cutworm was present in Lethbridge, Alberta, at light traps. (104)

1949. Can. Insect Pest Rev. 27.
The dingy cutworm was present in Norfolk County, Ontario, on tobacco (64); in Cedar Springs, Ontario, on common mallow (128); and in Kent and Norfolk, Ontario, on tobacco. (164)

1950. Can. Insect Pest Rev. 28.
The dingy cutworm was present at Blenheim, Ontario, on tobacco (128); in southwestern Ontario on vegetable crops (147); at Marmora, Ontario, on meadows (171); and in Ontario on garden crops. (254)

1951. Can. Insect Pest Rev. 29.
The dingy cutworm was present at Marmora, Ontario, on potato stalks. (66)

1958. Can. Insect Pest Rev. 36.
The dingy cutworm was seen in British Columbia in gardens and fields. (252)

1959. Can. Insect Pest Rev. 37.
The dingy cutworm was taken in Chatham, Ontario, in light traps. (237)

1960. Can. Insect Pest Rev. 38.
Feltia ducens was taken in light traps at Chatham, Ontario. (223-224)

1961. Can. Insect Pest Rev. 39.
Feltia ducens was taken in light traps at Chatham, Ontario. (209-210)

1962. Can. Insect Pest Rev. 40.
Feltia ducens was taken in light traps at Chatham, Ontario. (93)

1963. Can. Insect Pest Rev. 41.
Feltia ducens was numerous in a few fields of flue-cured tobacco in Norfolk County, Ontario. (92) *Feltia ducens* was taken near Delhi, Ontario. (127) *Feltia ducens - subgothica* attacked tobacco. (220)

1964. Can. Insect Pest Rev. 42
The dingy cutworm was present at Asquith, Saskatchewan, in stubble (142, 174) and in Norfolk County, Ontario, on tobacco. (194)

1966. Can. Insect Pest Rev. 44.
The dingy cutworm was present at Clavet, Saskatchewan, on wheat stubble. (2)

Chittenden, F. H. 1898. Insects injurious to beans and peas. U. S. Dep. Agr., Yearbook of Agr.:233-260.
Numerous leaf-feeding caterpillars feed upon the foliage of leguminous garden plants, of which cutworms of several species are among the most important. One of the common forms found on peas and beans is the western striped cutworm (*Feltia subgothica* Haw.), which is widely distributed and injurious. (257)

Chamberlin, F. S. and N. Allen. 1957. Tobacco cutworms. How to control them. U. S. Dep. Agr. Leaflet 417:1-8.
The dingy cutworm is grayish brown and has a broad, buff, gray stripe down the back. This species (*Feltia subgothica*) is remarkably hardy and

is not easily destroyed by plowing. It is one of the more common species in Tennessee, Virginia, and to the north. (4)

Clark, N. 1938. What's new in farm science. Wisc. Agr. Exp. Sta. Bull. 440:1-95.
Feltia ducens was one of four species of cutworms which caused damage in Wisconsin. A poison bait formula is given and habits of cutworms and natural control are discussed. (19-21)

Claypole, E. W. 1885. Entomology by the electric lamp. Can. Entomol. 117-119.
Adults of *Agrotis subgothica* were taken about arc-lamps in the middle of June in Akron, Ohio. (118)

Cook, A. J. 1875. Insects injurious to the farm, garden and orchard. 13th Annu. Rep. Secr. State Bd. Agr. Mich.:106-152.
A general description is given for cutworms. A plate of the dingy cutworm is shown. (110)

Cook, W. C. 1920. Cutworms and army worms. Office Minn. State Entomologist, Univ. Farms, Circ. 52:1-8.
Cutworm control, life histories, and habits are discussed. *Feltia ducens* is included in a key for common Minnesota cutworms. (4)

Cook, W. C. 1934. Cutworms and armyworms. Minn. Agr. Exp. Sta. Circ. 48:1-8.
The dingy cutworm is brownish tan, similar to the dark-sided cutworm. There are stripes on the sides, notched on top of each segment. Sometimes there are faint diagonal markings present. (4) A field key for the identification of Minnesota cutworms is included. (3)

Crosby, C. R. and M. D. Leonard. 1917. Manual of vegetable garden insects. The Macmillan Co., New York. 391 pp.
The egg, larva, pupa, and adult of the dingy cutworm are described and the life history is discussed. Food plants include corn, wheat, grasses, clover, strawberry, bean, pea, squash, cucumber, tomato, sweet potato, cabbage, and horseradish. (271-272)

Crumb, S. E. 1915. A key to the cutworms affecting tobacco. J. Econ. Entomol. 8:392-396.
The larva of *Feltia ducens* (=*subgothica*) has been bred from egg to adult and no character has been found by which it may be distinguished from the larva of *Feltia jaculifera*. (392)

Crumb, S. E. 1927. The armyworms. Bull. Brooklyn Entomol. Soc. 22:1-306.
A key is given to the species of noctuid larvae which have the armyworm habit of migrating in numbers, their U. S. distribution, food plants, and description of the mature larvae. The dingy cutworm (*Feltia ducens* Wlk.) is included in this key. (41, 44, 174)

Crumb, S. E. 1927. Tobacco cutworms and their control. U. S. Dep. Agr. Farmers' Bull. 1494:1-14.
The dingy cutworm (*Feltia ducens*) passes the winter in the larval state or egg stage. Some examples of cutworm baits are given. (4-5)

Crumb, S. E. 1929. Tobacco cutworms. U. S. Dep. Agr. Tech. Bull. 88:1-180.
According to this author, *Feltia ducens* and *Feltia subgothica* are closely parallel in seasonal apportionment of their activities (61). A description of the life stages of *Feltia subgothica* is given (62-68). The main flight of the moths in the North occurs during August and the early part of September. (61)

Crumb, S. E. 1932. The more important climbing cutworms. Bull. Brooklyn Entomol. Soc. 27:73-100.
The fully grown larva of the dingy cutworm is described. The dingy cutworm is found in the North throughout the breadth of the United States and Canada. (80-81)

Crumb, S. E. 1956. The larvae of the Phalaenidae. U. S. Dep. Agr. Tech. Bull. 1135:1-356.
A description of the dingy cutworm larva and its geographical distribution are given. (88)

Davis, G. C. 1896. Some injurious insects. I. Climbing cutworms. Mich. Agr. Exp. Sta. Bull. 132:1-30.
The dingy cutworm, (*Feltia subgothica*) Haw., is listed as a climbing cutworm. It is commonly found over the eastern United States and Canada. (7)

Dod, F. H. W. 1911. Further notes on Alberta Lepidoptera. Can. Entomol. 43:329-339.
The synonymy and disposition of type specimens were reviewed. (334)

Ficht, G. A. 1940. Notes on Indiana Noctuidae. Proc. Indiana Acad. Sci. 49:243-253.
"*F. ducens* Wlk. (1402). Dingy cutworm. Common and destructive. Numerous from August through October."
"*F. subgothica* Haw. (1403). Dingy cutworm. Less numerous than *ducens*; occurring at approximately the same time." (244)

Fitch, A. 1856. Entomology. No. 8. Cutworms. Country Gentleman 7:154-155, 171.
Agrotis subgothica was the most common species of *Agrotis* in New York. The adult is described. (171)

Forbes, S. A. 1890. Notes on cutworms. 16th Rep. State Entomol. Ill.:84-97.
The dingy cutworm (*Agrotis subgothica*) was the most abundant cutworm in southern Illinois. It damaged meadows and clover fields and its preference for clover was quite decided. A description of the larval stage is given. (88-89)

Forbes, S. A. 1904. The more important insect injuries to Indian corn. Univ. Ill. Agr. Exp. Sta. Bull. 95:331-399.
The dingy cutworm, *Feltia subgothica* Haw., is one of the corn cutworms. The plant is cut off when young at or near the surface of the ground by a whitish, grayish, or blackish caterpillar frequently found in the earth near the injured plant. (346-347)

Forbes, S. A. 1905. Noxious and beneficial insects. Twenty-third Ill. State Entomol. Rep.:1-273.
The dingy cutworm is one of several species of corn cutworms. *Feltia subgothica* Haw. and *Feltia jaculifera* are remarkably alike and sometimes are called *Agrotis tricosa* or *A. herilis*. (26-28)

Forbes, W. T. M. 1923. Trap-lantern record at Ithaca, New York. (Lepidoptera) Can. Entomol. 55:151-158.
This paper gives seasonal records at Ithaca for the more common species of Lepidoptera taken at light in a trap during 1919 and 1920. The dingy cutworm (*Feltia subgothica*) is included in the list of species of economic importance. (153)

Forbes, W. T. M. 1954. Lepidoptera of New York and neighboring states. Cornell Exp. Sta. Memoir. 329:1-433.
A detailed description of the moth of *Agrotis ducens* Walker is given. The author considers *subgothica* of authors, perhaps Haworth; *jaculifera* variety, Guenée, including Holland plate 22; figure 21 *subgothica* as synonyms of *Agrotis (Feltia) ducens*. (46)

French, G. H. 1878. Insects injurious to the vegetable garden. Trans. Ill. State Hort. Soc. for 1877-1878. 11:179-203.
The unique characters of the dingy cutworm larva, pupa, and adult are described. (190-191)

French, G. H. 1878. Moths - Lepidoptera. 7th Rep. State Entomol. Ill.: 79-106.
The gothic dart is the species *Agrotis subgothica* Haw. The larva is the dingy cutworm. This cutworm is about an inch long when it is fully grown. They remain in the larva state longer than other species because they do not change to pupae before July. (89-90)

French, G. H. 1878. Lepidoptera. 7th Rep. State Entomol. Ill.:135-268.
Agrotis subgothica, Haw. Gothic Dart. This species is found over quite a wide range of territory, from the Atlantic district to Colorado. A description of life stages is given. (204-205)

Frost, S. W. 1955. Cutworms of Pennsylvania. Penn. Agr. Exp. Sta. Bull. 596:1-29.
"This common species often cuts off plants at the surface of the ground. The dingy cutworm is widely distributed in Canada and Northern United States. The moths begin to emerge in July and are in flight until September." (18-19)

Garman, H. 1892. Some common pests of the farm and garden. Ky. Agr. Exp. Sta. Bull. 40:1-51.
The dingy cutworm is especially injurious in gardens and fields. The dingy cutworm produces a single brood each year. They destroy young plants. (21-22)

Garman, H. 1895. Cutworms in Kentucky. Ky. Agr. Exp. Sta. Bull. 58:89-109.
The dingy cutworm (*Feltia subgothica*) appears in the spring. (96)

Ghiradella, H. 1971. Fine structure of the Noctuid moth ear. I. The transducer area and connections to the tympanic membrane in *Feltia subgothica* Haworth. J. Morph. 134:21-27.
The ears of the noctuid moths appear to be unique among auditory organs in their extreme simplicity. Adults of the dingy cutworm *Feltia subgothica* (Haworth) were used for this study. (21)

Gibson, A. 1912. Cutworms and armyworms. Can. Dep. Agr., Div. Entomol. Bull. 3:1-29.
In the United States, the dingy cutworm (*Feltia subgothica*) is a serious enemy to corn, wheat, and early vegetables, and has been found climbing fruit trees and shrubs to devour the buds and leaves. A description of the appearance of the dingy cutworm is given. (25)

Gibson, A. 1915. Cutworms and their control. Can. Dep. Agr., Entomol. Br. Bull. 10:1-31.
"Larvae of *Feltia ducens* have been found in spring and in September. In eastern Canada moths are abundant in August and in western Canada about a month earlier."

Gillette, C. P. 1891. Notes and experiments upon injurious insects and insecticides. Iowa Agr. Exp. Sta. Bull. 12:505-562.
The dingy cutworms (*Agrotis subgothica* and *A. tricosa*) are very abundant garden species and are also common in corn fields. The moths were captured from July through September. The author combines the two species because they are very similar. (539-540)

Gossard, H. A. 1917. Cutworms, their habits, characteristics and means of control. Ohio Agr. Exp. Sta. Mon. Bull. 2(3):85-90.
The dingy cutworm (*Feltia subgothica*) is listed as one of the most common and distructive cutworms in Ohio. "Their commonest and most effective enemies are parasitic flesh flies which lay their eggs just behind the head of the cutworm." (85-90)

Grote, A. R. and C. T. Robinson. 1868. Notes on the North American Lepidoptera in the British Museum and described by Mr. Francis Walker. Trans. Amer. Entomol. Soc. 2:67-88.
"Part IX.-1856. *Feltia ducens* Walk., p. 203 = *Agrotis subgothica*, Haw." (77)

Grote, A. R. 1873. A study of North American Noctuidae. Bull. Buffalo Soc. Nat. Sci. 1:95-128.
"*Agrotis subgothica* Haworth, *Agrotis jaculifera*, Guenée, p. 262, plate 5, fig. 4 Habitat, Atlantic District; Colorado Territory (coll. Theo. L. Mead, No. 62)."

Grote, A. R. 1875. Preliminary list of the Noctuidae of California. Can. Entomol. 8:25-28.
Two specimens of *Agrotis subgothica* were collected on Vancouver Island, British Columbia. (27)

Grote, A. R. 1891. Correspondence. Can. Entomol. 23:202.
This is Grote's reply to Tutt's article on the synonymy of *tritici*, *subgothica*, and *jaculifera*.

Grote, A. R. 1891. The male genitalia and the subdivisions of *Agrotis*. Can. Entomol. 23(7):147-152.
The synonymy of *tricosa-jaculifera-subgothia* is discussed. (151)

Grote, A. R. 1896. A reply to Professor Smith. Can. Entomol. 28(12):301-302.
The synonymy of *Agrotis subgothica* is discussed.

Guenée, A. 1852. Species Général des Lépidoptéres. 1:262. Pl. 5, fig. 4.
This is the original description of *Agrotis jaculifera* in French. (262)

Hart, C. A. 1903. Synopsis of insect collections for distribution to Illinois High Schools. Ill. State Lab. Nat. Hist.:7-64.
115. *Feltia subgothica* Haw. (*Agrotis*). Gothic Dart=moth; l., Dingy Cutworm. F., grain crops, garden vegetables, etc. H. as young larva, becoming destructive in May and early June, enters earth and forms oval cell in which it remains a month or more and then pupates; I, July to end of Sept. Adults common at electric lights. Very abundant and destructive. See No. 108. Outer third of wings pale with dark outer border, latter invaded by two acute points from pale area (the "Σ mark"); hind wings of pale white with dark border. (30)

Haworth, A. H. 1810. Lepidoptera Brittannica. Entomol. Soc. London. 512 pp.
This is the original description (in Latin) of *Noctua (Feltia) subgothica*. (224)

Holland W. J. 1968. The moth book. A guide to the moths of North America, Dover Publ., Inc., New York. 479 pp.
This common species, *Feltia subgothica* (Haw.), the subgothic dart, is found in the northern portions of the U. S. and also in Canada. The moth is illustrated in Plate XXII. The larva is one of the most common cutworms, but is found more abundantly in the west than in the east. The species has a wide range over the northern portions of the United States and throughout southern Canada. (186)

King, K. M. 1949. The light trap as an indicator of population trends in Noctuidae. Univ. Minn. Summ. Ph.D. Theses 3:59-62.
Feltia ducens was common by both flower collection and light trap, but a large and variable part of their flight periods was not represented by the flower collections.

Knutson, H. 1944. Minnesota Phalaenidae (Noctuidae). The seasonal history and economic importance of the more common and destructive species. Minn. Agr. Exp. Sta. Tech. Bull. 165:1-128.
Collection records and seasonal history of *Feltia subgothica* are given. (25-26)

Lintner, J. A. 1874. Notes on some New York Noctuidae, etc. Entomol. Contributions 3:157-167. (from Rep. N. Y. State Cabinet Nat. Hist. 26).
The author describes *Agrotis tricosa* as a new species and gives his interpretation of synonymy of *Agrotis subgothica* Haworth, *Agrotis tricosa* nov. sp., and *Agrotis herilis* Grote. Lintner's *tricosa* was later placed in the synonymy of *Feltia subgothica* (Haworth). (159-161)

McDunnough, J. 1938. Check list of the Lepidoptera of the United States of America. Part 1. Macrolepidoptera. Mem. So. Calif. Acad. Sci. 1:1-275.

The author assigned number 1442 to *ducens* Walker and considered *radiata* Harris as a synonym. The author assigned 1445 to *subgothica* Haworth and considered *jaculifera* Guenée and *tricosa* Lintner as synonyms.

Marcovitch, S. 1928. Studies on toxicity of fluorine compounds. Tenn. Agr. Exp. Sta. Bull. 139:1-48.
"Fluorine compounds do not seem to be repellent to insects, and are therefore, in many cases, more effective than arsenicals, especially with the cutworm (*Feltia ducens*)." (43)

Marcovitch, S. 1928. The relative toxicities of arsenicals and fluorine compounds to various organisms. J. Econ. Entomol. 21(1):108-114.
With the cutworm, *Feltia ducens*, sodium arsenite gave only 57% mortality in 72 hours while sodium fluosilicate gave 88%.

Marcovitch, S. and W. W. Stanley. 1931. Control of tobacco insects in Tennnessee. Tenn. Agr. Exp. Sta. Bull. 160:1-14.
The adult *Feltia ducens* is illustrated. Poison bait is suggested for control of cutworms in tobacco. (10-12)

Marten, J. 1880. Noctuidae. (Owlet moths.) Ill. Dep. Agr. Trans. 18 Append.: 128-140.
The larva of *Agrotis subgothica* is described and the adult is illustrated. Larvae damage gardens in June, pupate in July, and moths emerge in September. (132)

Martin, S. and F. B. Cotner. 1934. Serological studies of moth proteins with special reference to their phylogenetic significance. Ann. Entomol. Soc. Amer. 27:372-383.
Feltia ducens was used to demonstrate a definite serological differentiation between families.

Merrill, L. G. and B. B. Pepper. 1956. Insects of asparagus and solanaceous crops. Econ. Ins. N. J. Ext. Bull. 295:1-14.
The distribution, description, importance, life history, and food habits of the dingy cutworm are discussed. (13-14)

Merrill, L. G. and B. B. Pepper. 1957. Insects of corn and the cabbage family. Econ. Ins. N. J. Ext. Bull. 305:1-16.
The distribution, description, importance, life history, and food habits of the dingy cutworm, *Feltia subgothica*, are discussed. (9)

Middleton, M. S. 1913. Cutworms and their control. Proc. Entomol. Soc. Br. Columbia. 3:36-37.
The dingy cutworm (*Feltia subgothica*) is commonly found in Canada. "Poison bait is possibly the best all-round material for control. It would seem that epidemics of insect pests are followed by periods of comparative rest, due almost wholly to parasitic control."

Morrill, A. W. 1919. The value of molasses and syrups in poisoned baits for grasshoppers and cutworms. J. Econ. Entomol. 12:337-343.
The use of poisoned baits against cutworms, including *Feltia subgothica*, is discussed. (341)

Muesbeck, C. F. W. 1920. A revision of the North American species of Ichneumon-flies belonging to the genus *Apanteles*. Proc. U. S. Nat. Mus. 58:483-576.
The dingy cutworm serves as a host to *Apanteles forbesi* (Viereck). The cocoons are white and solitary and seem to be widely distributed. (516)

Orton, W. A. and F. H. Chittenden. 1917. Control of diseases and insect enemies of the home vegetable garden. U. S. Farmers' Bull. 856:1-72.
There is a plate showing the dingy cutworm (*Feltia subgothica*) in the following stages: a, moth, or adult, wings expanded; b, larva, in curled-up position; c, moth, with wings folded. (16)

Osborn, H. 1878-79. Report on noxious insects of the orchard. Trans. Iowa State Hort. Soc. 13:368-402.
A figure is given representing the Gothic Dart (*Agrotis subgothica*), which is the adult of the "western striped cutworm." (379)

Packard, A. S. 1869. Guide to the study of insects. Henry Holt and Co., New York. 715 pp.
Agrotis subgothica adults resemble *A. cochrani*. The pupa remains in the ground longer, the adult emerging 4 to 6 weeks later than *A. cochrani*. (306)

Packard, A. S. 1881. Half hours with insects. Estes and Lauriat. Boston. 384 pp.
The dingy cutworm (*Agrotis subgothica*) larva is described and the adult is illustrated. (22)

Padilla, R. C. 1952. Aldrin y Dieldrin. Dos nuevos insecticidas orgánicos de grandes perspectivas para la protección de nuestra agricultura. Fitofilo 6(7):25-48.
Aldrin is recommended for the control of *Feltia subgothica*. (35-36)

Palm, C. E. and W. D. Wylie. 1943. Biology and control of cutworms. 54th Rep. Cornell Agr. Exp. Sta. 1941:130.
Laboratory tests with various bait formulas indicated that sodium fluo-silicate and bran made the most efficient cutworm bait. The larvae of several species of cutworms were used in these tests, including the dingy cutworm (*Feltia ducens*).

Perkins, G. H. 1894. Report of the entomologist. Seventh Annu. Rep. Vt. Agr. Exp. Sta.:1-151.
Feltia subgothica is one of the smaller cutworms, being, when fully grown, only an inch and a quarter long. The moth is lighter in color and much more distinctly marked than most species. (141)

Puttler, Benjamin and S. E. Thewke. 1971. Field and laboratory observation of *Hexameris arvalis* (Nematoda:Mermithidae) a parasite of cutworms. Ann. Entomol. Soc. Amer. 64(5):1102-1106.
In Missouri and adjacent states, the nematode *Hexameris arvalis* Poinar-Gyrisco was commonly found in clover and alfalfa fields parasitizing the dingy cutworm, *Feltia subgothica*. (1102)

Riley, C. V. 1867. A chapter on cutworms. Prairie Farmer 19:413-414.
Agrotis subgothica is the name of the dingy cutworm moth. The author calls the cutworm the striped cutworm. (414)

Riley, C. V. 1869. Cutworms. The natural history of twelve distinct species. 1st Rep. Noxious, Beneficial and Other Insects Mo.:67-91.
The dingy cutworm (*Agrotis subgothica*) was destructive in gardens in Illinois. (82) A description of appearance and life history are given. (83)

Riley, C. V. 1881. Notes and additions. Lepidoptera. Index and Suppl. to Mo. Rep.:54-58.
"*Agrotis subgothica* Harr. (Rep. I, p. 81). The moth represented under this name at Fig. 29, a, has since been described by Grote as *A. herilis*, and that at Fig. 29, b, has since been described by Lintner as *A. tricosa*." (55)

Riley, C. V. 1882. The noctuidae in the Missouri entomological reports. Papilio 2:41-44.
Agrotis subgothica is the same as *A. jaculifera*. (44)

Roeder, K. D. 1967. Turning tendency of moths exposed to ultrasound while in stationary flight. J. Insect Physiol. 13:873-888.
A differential anemometer makes it possible to follow changes in the direction of the aerial wake created by a moth in stationary flight. The sign (right or left) of this direction indicates that certain Noctuid species, of which the one mostly used was the dingy cutworm (*Feltia subgothica*), attempt to turn away from a horizontal souce of ultrasonic pulses over a wide range of sound intensities.

Saunders, W. 1883. Cutworms. Insects injurious to fruits. J. B. Lippincott & Co. Philadelphia. 436 pp.
The striped cutworm, *Agrotis subgothica* Haworth, is an ash gray color with broad, dark, longitudinal lines and several narrow lighter ones. (328)

Sherman, F., Jr. 1914. Insect enemies of corn. North Carolina Dep., Agr. Bull. 35:1-56.
Dingy cutworms (*Feltia subgothica* Haw.) were captured on Sept. 12, 27, 1904: Coll. Mr. Brimley. (17)

Slingerland, M. V. 1893. Notes from the Cornell Insectary. I. Some results of a trap-lantern experiment. Can. Entomol. 25:81-86.
Feltia subgothica was excessively abundant in New York. More specimens of this moth were taken than any other species of insect. (85)

Singerland, M. V. 1895. *Feltia subgothica*, Haworth, or *Agrotis* (Subgen. *Agronoma) Jaculifera*, Guenée, which? Can. Entomol. 27:301-308.
The synonymy of *subgothica, jaculifera,* and *tritici* is discussed.

Singerland, M. V. 1895. Climbing cutworms. Cornell Univ. Agr. Exp. Sta. 104:641-685.
A description of the appearance, distribution, habits, and life history of the dingy cutworm (*Agrotis subgothica*) is given. (660-665)

Singerland, M. V. 1896. The *Agrotis subgothica* of Haworth, again. Can. Entomol. 28(12):295-299.
The synonymy of *Agrotis subgothica* is discussed.

Smith, J. B. 1891. List of the Lepidoptera of Boreal America. Philadelphia, Amer. Entomol. Soc. 1891.:1-124.
This publication was an attempt to list all the described Lepidoptera of Boreal America. 1713. *Feltia subgothica* Steph. (38)

Smith, J. B. 1896. Concerning *Feltia*, and other matters. Can. Entomol. 28:4-8.
Synonymy, including synonymy of *subgothica*, is discussed.

Speare, A. T. 1920. Further studies of *Sorosporella uvella*, a fungous parasite of Noctuid larvae. J. Agr. Res. 18:399-438.
"The dingy cutworm (*Feltia subgothica*) was inoculated with *S. uvella* either by direct contact, by spraying, or by feeding." (432)

Stanley, W. W. 1936. Studies of the ecology and control of cutworms in Tennessee. Tenn. Agr. Exp. Sta. Bull. 159:1-16.
The dingy cutworm (*Feltia ducens* Walker and *Feltia subgothica* Haworth) is of great economic importance in Tennessee. A rather wet fall, with the remainder of the year dry, favored adult abundance of *F. subgothica*. A dry fall favors the abundance of *F. ducens*. (6)

Stedman, J. M. 1902. The more important insects injurious to wheat in Missouri. 34 Annu. Rep. Mo. State Bd. Agr.:55-141.
The dingy cutworm has been found to be the most important pest causing damage to wheat. A description of the appearance, distribution, habits, and life history of *Feltia subgothica* is given. (115-117)

Stedman, J. M. 1906. The more important insects injurious to corn in Missouri. Mo. Bd. Agr. Rep. 38:271-286.
One of the most important cutworms found to be doing great harm to corn was the dingy cutworm, *Feltia subgothica*. A life history is given for the dingy cutworm. (272-274)

Stephens, J. F. 1829. Illustrations of British Entomology. Haustellata 2:126.
Feltia subgothica Haworth is a scarce insect in London and in Norfolk. A description of the moth of the dingy cutworm is given.

Tietz, H. M. 1951. The Lepidoptera of Pennsylvania. A manual. Penn. Agr. Exp. Sta. Bull.:1-194.
Life history: Crumb, 1929 U.S. Dep. Agr. Tech. Bull. 88:63 egg, larva.
A list of food plants of the dingy cutworm is given. (53)

Tietz, H. M. 1972. An index to the described life histories, early stages and hosts of the macrolepidoptera of the continental United States and Canada. A. C. Allyn, Sarasota, Fla. 1-2:1-1041.
This publication includes a list of periodicals, journals, bulletins, and memoirs which deal with lepidopterous life histories and host plants. It also contains a list of insect common names and another list of common names of plants upon which lepidopterous insects feed. The species names are listed alphabetically with synonyms, references dealing with life history, and food plants. (618-619)

Turner, W. B. 1918. Female Lepidoptera at light traps. J. Agr. Res. 14: 135-149.

It is probable that four species (*Feltia subgothica* Haworth, *F. annexa* Treitschke, *F. gladiaria* Morrison, and *F. jaculifera* Guenée) were collected at light traps at Hagerstown, Md. (136)

Tutt, J. W. 1896. On *Agrotis tritici*, Linn., *A. subgothica*, Haw., and *Agrotis jaculifera*, Gn. Can. Entomol. 28:17-24.
The synonymy of *Agrotis tritici* and *Agrotis subgothica* is argued.

United States Department of Agriculture Cooperative Economic Insect Report[1]

The Bureau of Entomology of the U. S. Department of Agriculture, in cooperation with the State Entomologists, Entomologists of the Agricultural Experiment Stations, State Departments of Agriculture, Agricultural Colleges, and other entomological agencies, organized an Insect Pest Survey in 1921. This survey attempted to assemble and disseminate all data on the distribution, seasonal and regional fluctuations of insect abundance, weather data as related to insect outbreaks, phenological data, and other miscellaneous information. Each year an annual digest of the important facts gathered during the past season was published in the form of Insect Pest Summaries.

From 1921 to 1950, this publication was entitled "The Insect Pest Survey Bulletin." This was not bound or indexed for the years 1942-1949. In 1951, the Bulletin was replaced by the "Cooperative Economic Insect Report," Vol. 1, No. 1, July 31, 1951. No explanation is given in this publication for the name change.

Since these references are too numerous to list separately, they are listed by years.

1922. U. S. Dep. Agr. Insect Pest Surv. Bull. 2.
The dingy cutworm was taken from alfalfa in Nebraska (39) and from light traps in Iowa. (265)

1924. U. S. Dep. Agr. Insect Pest Surv. Bull. 4.
The dingy cutworm was taken from clover or rankly growing weeds in Mississippi. (35)

1925. U. S. Dep. Agr. Insect Pest Surv. Bull. 5.
The dingy cutworm was found on truck crops in Mississippi (67), on corn in Iowa (100), and on tobacco in Virginia and Kentucky. (134)

1926. U. S. Dep. Agr. Insect Pest Surv. Bull. 6.
The dingy cutworm was found to be damaging flax fields in Minnesota. (130)

1927. U. S. Dep. Agr. Insect Pest Surv. Bull. 7.
The dingy cutworm was found on corn in Nebraska. (39, 145)

1931. U. S. Dep. Agr. Insect Pest Surv. Bull. 11.
The dingy cutworm was found to be abundant in gardens in Nebraska. (163)

1932. U. S. Dep. Agr. Insect Pest Surv. Bull. 12.
The dingy cutworm was causing trouble in gardens in Washington. (133)

[1]Issued by Plant Protection and Quarantine Programs, Animal And Plant Health Inspection Service, U. S. Department of Agriculture.

1933. U. S. Dep. Agr. Insect Pest Surv. Bull. 13.
The dingy cutworm was numerous enough to check the growth of new shoots arising from the crowns of alfalfa plants after the crop was mowed in September. Many dead larvae were found after several cold nights. (298)

1934. U. S. Dep. Agr. Insect Pest Surv. Bull. 14.
The dingy cutworm was very abundant in Tennessee. (96)

1935. U. S. Dep. Agr. Insect Pest Surv. Bull. 15.
The dingy cutworm was causing serious damage to early gardens in Clarksville, Tenn. (29), to alfalfa in Kansas (66), and to corn, flax, onions, soybeans, and hawthorn raspberry in Minnesota. (219-220)

1937. U. S. Dept. Agr. Insect Pest Surv. Bull. 17.
The dingy cutworm was abundant in timothy and bluegrass pastures in Tennessee (73) and in alfalfa and wheat fields in Kansas. (74)

1938. U. S. Dep. Agr. Insect Pest Surv. Bull. 18.
The dingy cutworm was seen in pastures in Kansas (55), on tobacco plants in North Carolina (145), in South Haven, Michigan (153), and on gardens in eastern Nebraska. (154)

1953. Coop. Econ. Insect Report. 3.
The dingy cutworm (*Feltia* sp.) was scattered throughout the southern half of the state of Minnesota. The heaviest concentrations of cutworms, including the dingy cutworm, were found feeding on flax in the south central and southwestern parts of Minnesota. (154)

1954. Coop. Econ. Insect Report. 4.
Many red clover and alfalfa fields in creek and river bottoms in central and extreme southwest Missouri have infestations of one dingy cutworm (*Feltia subgothica*) per square foot. Damage was very light. Most of the cutworms were in third and fourth instar stages. (268) Some red clover along the Missouri River averages 2-3 dingy cutworm larvae per square foot. (306)

1955. Coop. Econ. Insect Report. 5.
The dingy cutworm (*Felta subgothica*) infestation was lighter than usual in some red clover fields in the central area, but still ranged from 2-5 larvae per square foot. (233)

1956. Coop. Econ. Insect Report. 6.
The dingy cutworm (*Feltia subgothica*) destroyed cucumbers and raspberry plants in northwestern Pennsylvania. (151) Heavy outbreaks of dingy cutworm occurred generally over the western half of Missouri in pastures and legumes early in the season. Heavy damage occurred to small corn over the central and northwest areas. (231) Larvae of the dingy cutworm (*Feltia subgothica*) up to one-half grown averaged approximately one per crown of alfalfa in grassy fields of the southwest area of Missouri. (265) The dingy cutworm was conspicuous in red clover at Bombay Hook and Kenton in Delaware. (388) Heavy flights of adult dingy cutworms in central and northern areas of Missouri were underway. Light trap catches averaged nearly 100 per night in Columbia. (924) *Feltia subgothica* was the most abundant cutworm species caught at black light traps in the fall in Maryland. (1135)

1957. Coop. Econ. Insect Report. 7.
Heavy numbers of the dingy cutworm (*Feltia subgothica*) occurred in the northwest area in drought-damaged pastures and legumes and by early June some injury to small corn appeared (Missouri). (102) Heavy numbers of dingy cutworm, ranging from 1-5 per square foot, occurred in many of the drought-injured pastures, especially in the northwest and north central areas. (103) During August and September, moths of the dingy cutworm (*Feltia subgothica*) appeared in large numbers in the trap at Fairland, Maryland. (947)

1958. Coop. Econ. Insect Report. 8.
Feltia subgothica attacked corn (284) and bluegrass. (286) Scattered fields, particularly in the northern New Madrid and Scott counties in Missouri, had light to very heavy infestations of the dingy cutworm. (287) The average infestation was 1-2 half grown dingy cutworm larvae per square yard in red clover in Saline County, Missouri. Infestation was much lighter in central and southwest areas. (361)

1959. Coop. Econ. Insect Report. 9.
Dingy cutworm damage to a few fields of corn up to 36 inches high necessitated replanting in the Missouri River bottom in the central portion of the state and a very few fields in the northwest river bottom. (202) The dingy cutworm was generally lighter in pastures, alfalfa, and red clover. The heaviest infestations averaged 1-2 per square yard in a few central area red clover fields. (204)

1960. Coop. Econ. Insect Report. 10.
The dingy cutworm caused extensive damage to corn in Missouri (199, 454, 482, 510) and to corn in Illinois. (547)

1961. Coop. Econ. Insect Report. 11.
The dingy cutworm was causing damage to corn in Missouri (443, 497) and Illinois. (93, 497)
The larvae of *Feltia ducens* were active in alfalfa in Nebraska. (225)

1962. Coop. Econ. Insect Report. 12.
The dingy cutworm damaged alfalfa in Nebraska (1954), clover and alfalfa in Illinois (454), garden plants in Missouri (490), chrysanthemums in Nebraska (495), grassland in Missouri (514), corn in Illinois and Missouri (550), and corn in Missouri. (583)

1963. Coop. Econ. Insect Report. 13.
The dingy cutworm infested corn in Missouri (150), chrysanthemums in Nebraska (377), clover and alfalfa in Illinois (427), corn in Iowa, and was taken in light traps in Wisconsin (1089), light traps in Ohio (1159), and light traps in Colorado. (1220, 1249)

1964. Coop. Econ. Insect Report. 14.
The dingy cutworm infested wheat fields in Nebraska (121), corn in Missouri (131, 566, 602), alfalfa in Nebraska (161), vegetable crops in Missouri (269), corn in Ohio (638), and was taken in light traps in Michigan (1081) and black light traps in Delaware and Ohio. (1105)

1965. Coop. Econ. Insect Report. 15.
The dingy cutworm was taken on corn in Ohio (159), on corn in Pennsylvania (600), on sugar beet fields in New York (646), and on corn in Iowa. (708)

1966. Coop. Econ. Insect Report. 16.
The dingy cutworm damaged corn in Missouri (108), field peas in Pennsylvania (641), and alfalfa in Wisconsin. (1080)

1967. Coop. Econ. Insect Report. 17.
The dingy cutworm caused damage to pea fields in Pennsylvania (208), asparagus in Delaware (345), and corn in Nebraska. (503)

1968. Coop. Econ. Insect Report. 18.
The dingy cutworm was taken on corn in Nebraska (109, 154), onions in Pennsylvania (391), soybeans in Iowa (636), at collection stations in Michigan (884, 901), and at light traps and in alfalfa in Wisconsin. (920)

1970. Coop. Econ. Insect Report. 20.
The dingy cutworm caused damage to corn in Nebraska (382, 400, 441) and was taken in light traps in South Dakota. (823)

1971. Coop. Econ. Insect Report. 21.
The dingy cutworm caused damage to cornfields in Nebraska (147) and corn in Pennsylvania (427). It was taken at black light traps in New Hampshire (631) and at collection stations in Michigan. (657)

Wadley, F. M. 1920. Note on *Eriopyga incincta*. J. Econ. Entomol. 13:147-150.
Feltia subgothica, usually the most common cutworm, was scarce. At the same time, the cutworm-like caterpillar of *Eriopyga incincta* was abundant. (148)

Walkden, H. H. and D. B. Whelan. 1942. Owlet moths (Phalaenidae) taken at light traps in Kansas and Nebraska. U.S. Dep. Agr. Circ. 643:1-25.
This circular contains data on the distribution, seasonal flight records, and peaks of abundance of Noctuid moths in the Missouri Basin obtained by means of light traps. The dingy cutworm (*Feltia subgothica*) was found to be abundant and of economic importance. (1)

Walkden, H. H. 1943. Cutworm and armyworm populations in pasture grasses, waste lands and forage crops. J. Econ. Entomol. 36:376-381.
A sack-trap method of collecting larvae was used and over a 4-year period *Feltia subgothica* was the most abundant species found. The dingy cutworm was found to be most abundant in March and early April. The dingy cutworm was the most abundant species found on overgrazed pastures. (378-379)

Walkden, H. H. 1950. Cutworms, armyworms and related species attacking cereal and forage crops in the Central Great Plains. U. S. Dept. Agr. Circ. 849:1-52.
The dingy cutworm is one of the most widely distributed species. It is rarely a destructive species west of the Mississippi. The dingy cutworm is commonly found feeding on pasture grass and roadside vegetation. There is a single generation annually. The moths are most abundant during September. (21-23)

Walker, F. 1856. List of the specimens of lepidopterous insects in the collection of the British Museum. Part IX:203.
A description of the male adult moth of the species *Feltia ducens* is given.

Walker, F. 1856. List of the specimens of lepidopterous insects in the collection of the British Museum. Part X. Noctuidae:308-327.
Agrotis jaculifera, Guen. Noct. i. 262, 417, Canada.
A description of appearance of the dingy cutworm is given. (327)

Waters, H. A. 1943. Rearing insects that attack plants. Amer. Assoc. Adv. Sci. Pub. 20:3-28.
A rearing technique is described that is suitable for rearing armyworm, yellow armyworm, black cutworm, spotted cutworm, speckled cutworm, and dingy cutworm. (15-16)

Webster, F. M. 1889. The dingy cutworm. (*Agrotis subgothica* Haw.). Insect Life. 2:29.
The dingy cutworm (*Agrotis subgothica* Haw.) was found by Mr. Henry Nobes in 1886 to be destroying ripening strawberries. The cutworms occurred in great numbers under the straw mulch.

Wedgeworth, H. H. and C. B. Anders. 1926. Poisoned bait for the control of cutworms. Miss. Agr. Exp. Sta. Circ. 62:1-3.
Feltia ducens (dingy cutworm) caused considerable damage to tomato plants in the field in Mississippi. Experiments with different baits are described. (1-3)

Weir, J. J. 1891. Note on *Agrotis subgothica*, Haw. The Entomologist 24:49-50.
The synonymy of the dingy cutworm is discussed.

Whelan, D. B. 1935. A key to the Nebraska cutworms and armyworms that attack corn. Nebraska Agr. Exp. Sta. Res. Bull. 81:1-27.
In addition to the key, a description of the larva, distribution, seasonal abundance, habits, and food plants of the dingy cutworm are discussed. (18)

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The dingy cutworm was collected and reared from chickweed sods used as cutworm traps. (595)

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"149 *Subgothica* Gothic Dart
St. 2, p. 126, t. 22, f3, G104 *Agrotis*. Near London and Barnstaple, Devon: but very scarce. June." (36)

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This index was prepared on the computer from keywords indicated on the index card file. Information may be retrieved by author's name (left-hand column) and year (right-hand column); by host plant, by geographical locality, and by subject, *i.e.*, larval description, life history, outbreak, geographical distribution, etc. The Canadian Insect Pest Review is abbreviated as CIPR, the Insect Pest Survey as IPS, and the Cooperative Economic Insect Report as CEIR.